

10/525889 525,889

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
11 March 2004 (11.03.2004)

PCT

(10) International Publication Number  
**WO 2004/020452 A2**

- (51) International Patent Classification<sup>7</sup>: **C07K**
- (21) International Application Number:  
PCT/EP2003/010085
- (22) International Filing Date: 28 August 2003 (28.08.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
0220197.8 30 August 2002 (30.08.2002) GB
- (71) Applicants (*for all designated States except US*): **GLAXOSMITHKLINE BIOLOGICALS SA** [BE/BE]; Rue de l'Institut 89, B-1330 Rixensart (BE). **UTRECHT UNIVERSITY** [NL/NL]; Padualaan 8, NL-3584 CH Utrecht (NL).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): **BIEMANS, Ralph** [BE/BE]; GlaxoSmithKline Biologicals S.A., Rue de l'Institut 89, B-1330 Rixensart (BE). **BOS, Martine** [NL/NL]; Utrecht University, Padualaan 8, NL-3584 CH Utrecht (NL). **DENOEL, Philippe** [BE/BE]; GlaxoSmithKline Biologicals S.A., Rue de l'Institut 89, B-1330 Rixensart (BE). **FERON, Christiane** [BE/BE]; GlaxoSmithKline Biologicals S.A., Rue de l'Institut 89, B-1330 Rixensart (BE). **GORAJ, Karine** [BE/BE]; GlaxoSmithKline Biologicals S.A., Rue de l'Institut 89, B-1330 Rixensart (BE). **POOLMAN, Jan** [NL/BE]; GlaxoSmithKline Biologicals S.A., Rue de l'Institut 89, B-1330 Rixensart (BE).
- (74) Agent: **LUBIENSKI, Michael, John**; GlaxoSmithKline, CIP (CN925.1), 980 Great West Road, Brentford, Middlesex TW8 9GS (GB).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:  
— *without international search report and to be republished upon receipt of that report*
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: REFOLDING METHOD

(57) Abstract: The present invention provides an isolated refolded NspA protein, and a method of preparing it.



WO 2004/020452 A2